



STATE OF MINNESOTA
Minnesota Pollution Control Agency

Industrial Division

**National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0000418**

PERMITTEE: Flint Hills Resources Pine Bend, LLC
FACILITY NAME: Flint Hills Resources Pine Bend, LLC – Pine Bend Facility
RECEIVING WATER: Mississippi River

CITY OR TOWNSHIP: Rosemount
ISSUANCE DATE: July 1, 2007
MODIFICATION DATE: January 10, 2011

COUNTY: Dakota
EXPIRATION DATE: June 30, 2012

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to protect water quality in accordance with Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090.3000 through 7090.3080, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, as modified on January 10, 2011. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E.

Acting Supervisor, Water Quality Permits Unit
Land and Water Quality Permits Section
Industrial Division

for The Minnesota Pollution Control Agency

Submit DMRs to:

Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Submit Other WQ Reports to:

Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact:
Linda Brooks, 651-757-2246.
- For specific permit requirements or permit compliance status, contact:
Gary A. Simonsen, 651-757-2726.
- General permit or NPDES program questions, contact:
MPCA, 651-282-6143 or 1-800-657-3938.

520 Lafayette Rd. N.; St. Paul, MN 55155-4194; 651-296-6300 (voice); 651-282-5332 (TTY)
Regional Offices: Duluth • Brainerd • Detroit Lakes • Marshall • Rochester

Equal Opportunity Employer • Printed on recycled paper containing at least 10% fibers from paper recycled by consumers

Table of Contents

Permitted Facility Description	3
Map of Permitted Facility	5
Summary of Stations and Station Locations	6
Limits and Monitoring Requirements	7-10
Chapter 1. Surface Discharge Stations	11-16
Chapter 2. Waste Stream Stations	16
Chapter 3. Industrial Process Water	16-18
Chapter 4. Mercury Management Plan	18-20
Chapter 5. Phosphorus Management Plan	20
Chapter 6. Industrial Stormwater Management	20-28
Chapter 7. Total Facilities Chapter	28-36

Required Permit Submittals:

Discharge Monitoring Reports (DMRs).....	21 days after end of each month
WET Test Results	July 21 and December 21 of each year
Construction of Sewer Upgrades Report.....	April 1, 2008
Mercury Treatability Study Plan	Within 3 months of permit issuance
Mercury Treatability Study Results	24 months after MPCA approval of Study Plan
Plans and Specifications for Mercury Removal Technology.....	30 months after permit issuance
Notice of Completion of Construction	18 months after MPCA approval of Plans and Specifications
Stormwater Pollution Prevention Plan	180 days after permit issuance
Stormwater Annual Report.....	March 31 of each year
Permit Application	180 days before permit expiration

Facility Description

The Flint Hills Resources Pine Bend, LLC facility (Facility) is located at Sections 13 and 24, Township 115 North, Range 19 West, Rosemount, Dakota County, Minnesota.

The Facility operates a refinery that processes crude oil into gasoline, jet fuels, aviation, gasoline, diesel fuel, asphalt, petroleum coke, road oil, liquefied petroleum gas, and sulfur. The refinery processes approximately 280,000 barrels of crude oil per day.

Process wastewaters, contaminated stormwater runoff including runoff from the bottoms loading facility, groundwater from the Spring Lake Trench pumping system, and a portion of the sanitary wastewaters generated at the refinery are treated at the Wastewater Treatment Plant (WWTP). The WWTP consists of the following unit operations: prescreening, oil/water separation using API and Wemco oil/water separators, equalization basins, coagulation and flocculation using polymer addition and rapid mixing, dissolved air floatation, powdered activated carbon addition, activated sludge process with diffused air, final clarification, pH adjustment, and final effluent polishing via ponds. Waste biological sludge is recycled and reused at the refinery coker unit. Other wastewater sludges are dewatered by centrifuge and recycled in total to refinery processes. Temporary equipment may be used at times to supplement existing centrifuge operations. Non-recyclable sludges are disposed of off-site as hazardous waste.

The treatment system also includes an Alternative Waste Handling Facility, where discrete wastes collected at the refinery via vacuum trucks or similar on-site methods are separated, with generated wastewater treated at the WWTP and sludges recycled to the refinery processes or disposed of offsite as hazardous wastes. Caustic wastewaters generated in the refinery process (including tank 312) are discharged to the WWTP via the oily water sewers. The refinery also operates a Water Re-use system, which takes treated WWTP effluent and treats it further, using chemical and physical processes to generate boiler feed.

All WWTP units are covered, with the exception of the final clarifiers, the waste-activated sludge holding tank, and the polishing ponds. Vapors and gases from the covered units are collected and vented via a closed system to a thermal oxidizer. The thermal oxidizers incinerate the vapors and gases, reducing VOC emissions and odors prior to discharge to the atmosphere.

The wastewater collection system includes an area drain system with diversion boxes where specific MPCA-approved dry weather flows or other approved streams are routed to the WWTP. Area drains also collect stormwater generated in the process units and include first flush diversion to the WWTP, and "overflow" discharge of stormwater to lined stormwater basins (South, Lower, and Southwest basins). Collected stormwater from these ponds is re-used for makeup to the refinery cooling towers or otherwise re-used for refinery water makeup, used in the firewater protection system, used for tank hydro testing, or discharged to the WWTP. A separate oily water sewer system conveys normal process wastewater to the WWTP.

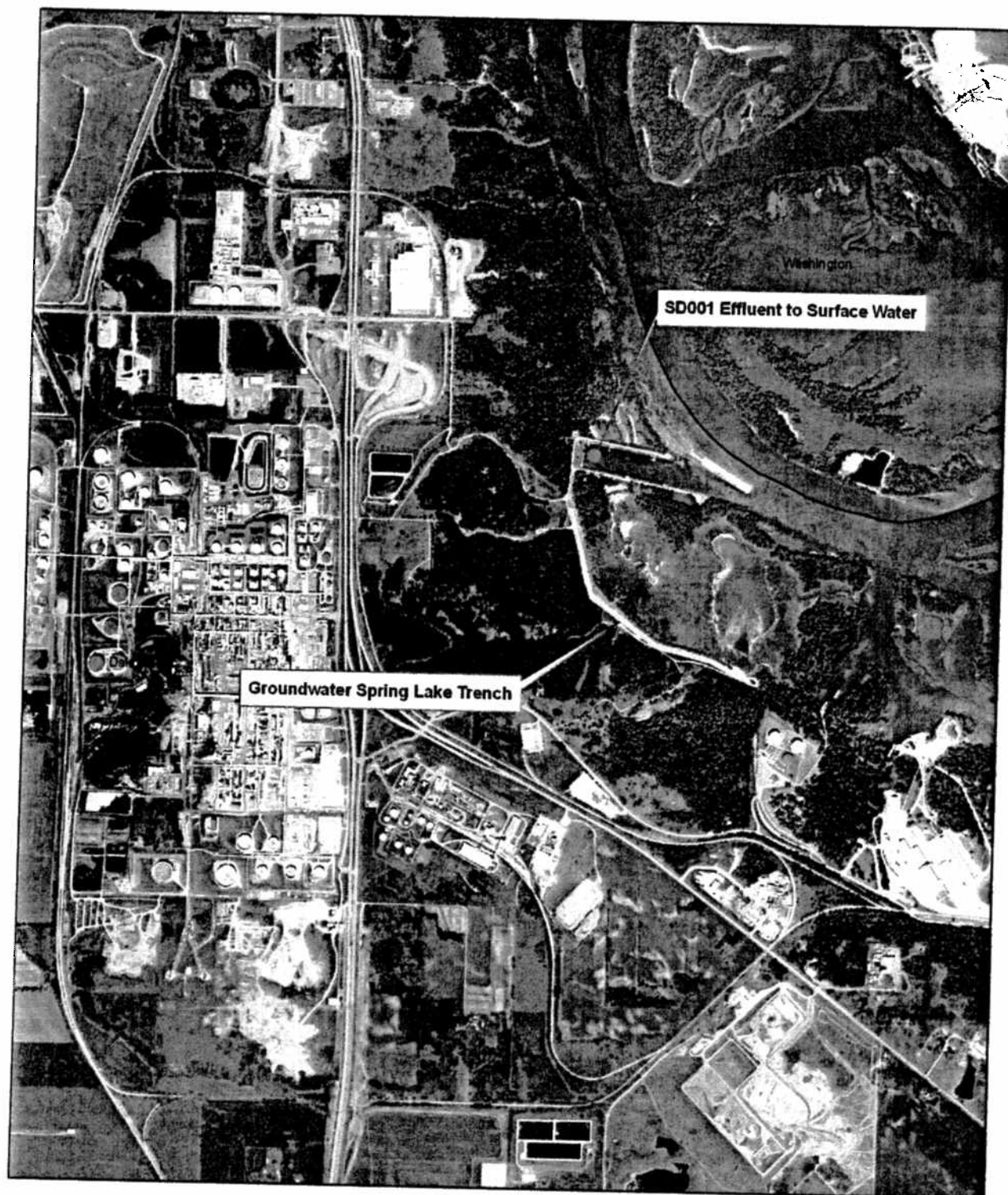
The refinery also has a clean water sewer where non-process area stormwater, boiler blowdown, and neutralized demineralizer regenerates are discharged to a firewater basin (B-5), the lower basin, or to the WWTP. The refinery contains a coker basin system, which collects and routes coke pile runoff and overflow of coker basin wastewater to the WWTP. The only basin approved for discharge through the permitted discharge SD001 is B-5, which discharges to the polishing ponds via a sump also collecting final clarifier overflow. The B-5 basin and other stormwater basins may be used for fire hydrant system maintenance and other approved uses in accordance with the approved Firewater Use and Management

Plan. Water from all other basins, to the extent not used for an approved use, is discharged through the WWTP. Effluent from the WWTP is monitored after the polishing ponds, and includes continuous flow, temperature, pH monitoring, and grab, or 24-hour composite sampling for the parameters required to be monitored. Treated effluent is discharged at an average rate of 4 million gallons per day (mgd) to the Mississippi River via a diffuser.

The location of the Facility is shown on the attached aerial photo.

The January 1, 1988, calculated design **maximum daily** flow for this facility is 5.2 mgd. In accordance with MPCA rules regarding nondegradation for all waters, the design **maximum daily** flow of the facility as of January 1, 1988, and associated mass loading are the baseline design flow and mass loading. This baseline flow and mass loading will be used to determine whether nondegradation review is required for any change in the discharge. Any change that results in an increase in design flow greater than 0.2 mgd and an increased loading of one or more pollutants, or any change in a discharge containing a toxic pollutant that results in a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality, is subject to nondegradation review, in accordance with Minn. R. 7050.0185.

Map of Permitting Facility and Discharge Locations



Permit Modified: January 10, 2011

Permit Expires: June 30, 2012

Flint Hills Resources Pine Bend LLC
Summary of Stations

Page 6

Permit #: MN0000418

Surface Discharge Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
SD001	Effluent To Surface Water	Total Facility Discharge	NE Quarter of Section 18, Township 115 North, Range 18 West

Waste Stream Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
WS002	Internal Waste Stream	Aeration Tanks	

Flint Hills Resources Pine Bend LLC **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 001: Total Facility Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, 05 Day (20 Deg C)	630	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	1473	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Chromium, Hexavalent (as Cr)	0.64	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	
Chromium, Hexavalent (as Cr)	1.43	kg/day	Daily Maximum	Jan-Dec	Grab	2 x Week	
Chromium, Hexavalent (as Cr)	29.0	ug/L	Daily Maximum	Jan-Dec	Grab	2 x Week	
Chromium, Total (as Cr)	8.3	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week	
Chromium, Total (as Cr)	18.6	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
COD (Chemical Oxygen Demand)	8126	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	4 x Week	8
COD (Chemical Oxygen Demand)	15795	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	4 x Week	8
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Mercury, Total (as Hg)	Monitor Only	ng/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	5
Nitrogen, Ammonia, Total (as N)	714	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Nitrogen, Ammonia, Total (as N)	1569	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	7 x Week	
Nitrogen, Ammonia, Un-ionized (as N)	0.46	mg/L	Daily Maximum	Jan-Dec	Calculation	7 x Week	3
Oil & Grease, Total Recoverable (Hexane Extraction)	217	kg/day	Calendar Month Average	Jan-Dec	Grab	5 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	416	kg/day	Daily Maximum	Jan-Dec	Grab	5 x Week	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Measurement, Continuous	1 x Day	7
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Measurement, Continuous	1 x Day	7
pH, Length Of Individual pH Excursion	60	min	Calendar Month Maximum	Jan-Dec	Measurement, Continuous	1 x Day	9
pH, Percent of Time Exceeding pH Limits	1	%	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	2
pH, Range Excursions Total	446	min	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	2
Phenols, Total	5	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phenols, Total	16	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phenols, Total	2214	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phosphorus, Total (as P)	Monitor Only	mg/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month	

Flint Hills Resources Pine Bend LLC **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 001: Total Facility Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Selenium, Total (as Se)	Monitor Only	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	614	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Solids, Total Suspended (TSS)	1423	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	7 x Week	
Sulfide, Total (as S)	5.8	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	
Sulfide, Total (as S)	12.9	kg/day	Daily Maximum	Jan-Dec	Grab	2 x Week	
Temperature, Water	120	Deg F	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Toxicity, Whole Effluent (Acute)	0.9999	TUa	Daily Maximum	Jun, Nov	24-Hour Flow Composite	1 x Month	1

WS 002: Aeration Tanks

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Oxygen, Dissolved	Monitor Only	mg/L	Daily Average	Jan-Dec	Measurement, Continuous	1 x Day	6

Period: Limits Applicable in the Final Period

SD 001: Total Facility Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, 05 Day (20 Deg C)	630	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	3 x Week	
BOD, 05 Day (20 Deg C)	1473	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	3 x Week	
Chromium, Hexavalent (as Cr)	0.64	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	
Chromium, Hexavalent (as Cr)	1.43	kg/day	Daily Maximum	Jan-Dec	Grab	2 x Week	
Chromium, Hexavalent (as Cr)	29.0	ug/L	Daily Maximum	Jan-Dec	Grab	2 x Week	
Chromium, Total (as Cr)	8.3	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week	
Chromium, Total (as Cr)	18.6	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
COD (Chemical Oxygen Demand)	8126	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	4 x Week	8
COD (Chemical Oxygen Demand)	15795	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	4 x Week	8
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	

Flint Hills Resources Pine Bend LLC **Limits and Monitoring Requirements**

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SD 001: Total Facility Discharge

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Mercury, Total (as Hg)	10	ng/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	4
Mercury, Total (as Hg)	17	ng/L	Daily Maximum	Jan-Dec	Grab	2 x Month	4
Nitrogen, Ammonia, Total (as N)	714	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Nitrogen, Ammonia, Total (as N)	1569	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	7 x Week	
Nitrogen, Ammonia, Un-ionized (as N)	0.46	mg/L	Daily Maximum	Jan-Dec	Calculation	7 x Week	3
Oil & Grease, Total Recoverable (Hexane Extraction)	217	kg/day	Calendar Month Average	Jan-Dec	Grab	5 x Week	
Oil & Grease, Total Recoverable (Hexane Extraction)	416	kg/day	Daily Maximum	Jan-Dec	Grab	5 x Week	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Measurement, Continuous	1 x Day	7
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Measurement, Continuous	1 x Day	7
pH, Length Of Individual pH Excursion	60	min	Calendar Month Maximum	Jan-Dec	Measurement, Continuous	1 x Day	9
pH, Percent of Time Exceeding pH Limits	1	%	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	2
pH, Range Excursions Total	446	min	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	2
Phenols, Total	5	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phenols, Total	16	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phenols, Total	2214	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	2 x Week	
Phosphorus, Total (as P)	Monitor Only	mg/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Month	
Selenium, Total (as Se)	Monitor Only	ug/L	Daily Maximum	Jan-Dec	24-Hour Flow Composite	1 x Week	
Solids, Total Suspended (TSS)	614	kg/day	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	24-Hour Flow Composite	7 x Week	
Solids, Total Suspended (TSS)	1423	kg/day	Daily Maximum	Jan-Dec	24-Hour Flow Composite	7 x Week	
Sulfide, Total (as S)	5.8	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	
Sulfide, Total (as S)	12.9	kg/day	Daily Maximum	Jan-Dec	Grab	2 x Week	
Temperature, Water	120	Deg F	Daily Maximum	Jan-Dec	Measurement, Continuous	1 x Day	
Toxicity, Whole Effluent (Acute)	0.9999	TUa	Daily Maximum	Jun, Nov	24-Hour Flow Composite	1 x Month	1

WS 002: Aeration Tanks

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Oxygen, Dissolved	Monitor Only	mg/L	Daily Average	Jan-Dec	Measurement, Continuous	1 x Day	6

Flint Hills Resources Pine Bend LLC
Limits and Monitoring Requirements

The Permittee shall comply with the limits and monitoring requirements as specified below.

Notes:

- 1 -- Acute toxicity shall be less than 1.0 TUa, or less than 50% mortality or immobilization of a test species in 100% effluent. See Chapter 1. for testing requirements.
- 2 -- Applicable to continuous pH measurement.
- 3 -- See Chapter 1 Section 6.1-6.3 for unionized ammonia calculation and restrictions of pH adjustment for unionized ammonia compliance.
- 4 -- See Chapter 4 for mercury monitoring requirements and compliance schedule.
- 5 -- See Chapter 4 for mercury monitoring requirements.
- 6 -- Submit data monthly with discharge monitoring reports. See Chapter 1 Section 8.23 for dissolved oxygen monitoring requirements.
- 7 -- The pH of the 24 hour composite sample shall not be less than 6.5 nor greater than 8.5.
- 8 -- To include COD sampling on Saturdays and Sundays.
- 9 -- pH shall be in the range 6.0 to 9.0 for continuous pH measurement.

Chapter 1. Surface Discharge Stations

1. Requirements for Specific Stations

- 1.1 SD 001: Submit a DMR 21 days after the end of each calendar month following permit issuance.

2. Sampling Location

- 2.1 Samples for station SD001 shall be collected from the treatment plant discharge (at the parshall flume discharge from the polishing ponds). No sampling is required for SD 002.
- 2.2 Samples and measurements required by this permit shall be representative of the monitored activity.

3. Surface Discharges

- 3.1 Floating solids or visible foam shall not be discharged in other than trace amounts.
- 3.2 Oil or other substances shall not be discharged in amounts that create a visible color film.

4. Discharge Monitoring Reports

- 4.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).

5. Acute Whole Effluent Toxicity (WET) Testing

Aquatic Life Toxicity Testing Evaluation

- 5.1 During June and November of each year the Permittee shall conduct whole effluent toxicity testing (an acute toxicity test battery) on the SD 001 discharge. The acute toxicity testing shall be conducted to determine compliance with the permit toxicity limitation. Upon request to, and approval by the MPCA, the month of testing may be changed in any year.
- 5.2 Submit the first test battery results by July 21 of each year following permit issuance. The test results shall be submitted with the supporting laboratory report.
- 5.3 Submit the second test battery results by December 21 of each year following permit issuance. The test results shall be submitted with the supporting laboratory report.

Species and Procedural Requirements

- 5.4 Tests shall be conducted in accordance with procedures outlined in EPA-600/4-90-027 "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (Acute Manual) and any revisions to the Manual, and "MPCA Toxicity Test Procedures and Test Conditions for NPDES Permits." In the event that a significant pH rise occurs during the test, the carbon dioxide headspace test may be used.
- 5.5 Test organisms for each test battery shall include the fathead minnow (*Pimephales promelas*), *Ceriodaphnia dubia*, and *Daphnia magna*.
- 5.6 Static renewal acute serial dilution tests of the effluent shall consist of a control, 12%, 25%, 50%, 75% and 100% effluent. The annual toxicity test conducted in June and November or at alternate dates and any unplanned voluntary toxicity test may be conducted using only 100% effluent and the control.
- 5.7 All effluent samples shall be flow proportioned, 24-hour composites. Test solutions shall be renewed daily from each fresh composite. Test solutions for unplanned, voluntary testing are not required to be renewed daily. Testing of the effluent shall begin within 36 hours of sample collection. Receiving water collected outside of the influence of discharge shall be used for dilution and controls.
- 5.8 Any deviation from the requirements of this section shall first be approved by the MPCA. All toxicity test results shall be submitted to the MPCA within 30 days of receipt of laboratory toxicity testing report.

Quality Control and Report Submittals

Chapter 1. Surface Discharge Stations

5. Acute Whole Effluent Toxicity (WET) Testing

- 5.9 Any test that does not meet quality control measures, or results which the Permittee believes reflect an artifact of testing shall be repeated within two (2) weeks. These reports shall contain information consistent with the report preparation section of the Acute Manual. The MPCA shall make the final determination regarding test validity.
- 5.10 In the event that toxicity test results demonstrate acute toxicity, or determines acute toxicity equal to or exceeding the 1.0 TUa for an aquatic species, the Permittee shall determine the source or cause of the acute toxicity and take actions as necessary to eliminate the source or cause. The Permittee shall also conduct additional toxicity testing upon request by the MPCA, or as required by the 1989 Consent Decree while in effect, to demonstrate toxicity or non toxicity. The Permittee shall submit a report to the MPCA which describes the determined source or cause of toxicity and the actions taken to resolve the toxicity. Actions to resolve the acute toxicity shall be implemented as soon as possible.

6. Special Requirements

Unionized Ammonia

- 6.1 The daily maximum unionized ammonia concentration in the SD001 discharge shall not exceed 0.46 mg/l and shall be calculated using the total ammonia concentration results (as N) obtained in the 24 hour composite sample, the medium pH value, and the daily average discharge temperature. The median pH is defined as the median value for the 24 hour period based on continuous pH monitoring as required by this permit. Hourly pH readings, as the maximum increment, shall be used to determine the pH median. The unionized ammonia concentration shall be determined in accordance with the formula described for calculation of unionized ammonia in Minnesota State Rule Chapter 7050.0222 Specific Standards of Quality and Purity for Class 2 Waters of the State; Aquatic Life and Recreation.
- 6.2 The pH of the SD001 discharge shall not be adjusted as a routine practice for the purpose of meeting the daily maximum unionized ammonia limitation of 0.46 mg/l.
- 6.3 The pH of the discharge may be adjusted for the purpose of meeting the pH limitations of this permit of 6.5 to 8.5 in the event that adjustment is required for this purpose. pH adjustments at the wastewater treatment plant, or in the wastewater influent to the wastewater treatment plant may be made as needed in order to provide for adequate wastewater treatment, involving all unit operations where pH adjustment is normally required to optimize pollutant removal.

Chapter 1. Surface Discharge Stations

6. Special Requirements

Powdered Activated Carbon Feed System

6.4 The Permittee shall use the powdered activated carbon treatment system (PACT) at the wastewater treatment plant on a daily basis, with powdered activated carbon fed to the wastewater treatment plant at the dosage rate and timing required to provide a non toxic effluent at powdered activated carbon target levels. In the event that the PACT system function or operation is interrupted to the extent that the concentration of activated carbon in the activated sludge is below the target levels effluent acute toxicity testing on the discharge shall be conducted. Acute toxicity testing shall be conducted if either of the following conditions occur:

1. A 3 day period in which the average powdered activated carbon feed rate is below 60 ppm.
2. A 2 day period in which the powdered activated carbon feed rate is below 500 lbs each day.

Acute toxicity testing shall be initiated coincident with worst case effluent conditions after either one of the above conditions occur. Acute toxicity testing conducted pursuant to carbon feed rate interruptions shall be conducted in accordance with the requirements as stated in this chapter except that all serial dilutions need not be completed (only 100% effluent and control is required).

The Permittee shall take immediate action to restore any interrupted function of the PACT system.

Sewer System Upgrade

6.5 The refinery sewer system shall be evaluated, redesigned, and upgraded as needed in accordance with the Sewer System Upgrade Final Plan dated April 27, 1999. The sewer system includes the process sewer system, the clean water sewer system, and the area drain sewer system. The sewer system shall be upgraded to meet the requirements as stated under Part II.B.1.d. in the May 18, 1998 Stipulation Agreement between Koch Refining Company and the MPCA and, at a minimum, the following performance requirements: assure compliance with the Standard Utilities Specifications described below; assure adequate capacity for current and future flows consistent with the sewer upgrade plan; assure that all oily waters (process wastewaters) are conveyed to the wastewater treatment plant or are consumed, reused, or recycled within the refinery without overflows to the area drain sewers, the clean water sewer or the ground; assure that all non-oily waters (e.g. clean or stormwater) in the sewer system are routinely conveyed to stormwater storage; assure sewer system reliability.

6.6 Standard Utilities Specifications.

The process, area drain and clean water sewers shall be tested to meet leakage specifications in accordance with Standard Utilities Specifications, as published by the City Engineers Association of Minnesota. Pressurized process, area drain and clean water sewers (e.g. force mains) shall meet the specifications for pressure testing and leakage as stated under Part 1, Standard Specifications for Watermain and Service Line Installation, Section 2611.3I, Hydrostatic Testing of Watermains, including No. 1 Pressure Test and No. 2 Leakage Test. Gravity process, area drain, and clean water sewers shall meet the specifications for pressure testing and leakage as stated under Part 2, Standard Specifications for Sanitary Sewer and Storm Sewer Installation, Section 2621.3 H, Sanitary Sewer Leakage Testing, including No. 1 Air Test Method or No. 2 Hydrostatic Test Method, and No. 3 Test Failure and Remedy. If a gravity process sewer does not meet the pressure test and leakage requirements under Part 2, the gravity sewer shall be upgraded using piping and materials and pipeline joint materials and connections which would enable the upgraded process sewer to meet the more restrictive pressure testing and leakage specification under Part 1, Standard Utilities Specifications above. If an area drain or clean waters sewer does not meet the pressure test and leakage requirements under Part 2, that sewer shall be upgraded to meet Part 2, Standard Utilities Specifications pressure test and leakage requirements. Changes to the specifications stated above may be made upon request to, and approval by, the MPCA.

Chapter 1. Surface Discharge Stations

6. Special Requirements

6.7 Schedule for Completion of Sewer Upgrades.

The Permittee shall implement all necessary programs and complete all construction upgrades as described in the Sewer System Upgrade Final Plan as necessary to comply with the performance requirements described above and the May 18, 1998 Stipulation Agreement, Part II..B.1.d., in accordance with the schedule in the Final Plan (Figure 2-2) and the following:

By December 31, 2008 complete the project for all necessary programs and construction upgrades for all sewers and applicable sewer appurtenances which were constructed or placed at the refinery during or after 1980.

Submit a report to the MPCA by April 1, 2009 on the construction of sewer upgrades for all sewers and applicable sewer appurtenances constructed or placed at the refinery during or after 1980.

This schedule may be modified only by approval of the MPCA.

Area Drains and Clean Water Sewer Management

6.8 Non oily waters (e.g. clean waters and stormwaters) shall be discharged to the area drains served by the diversion boxes. Any non oily waters not discharged to area drains, or discharged to area drains not served by diversion boxes, may be discharged to MPCA approved locations provided inspections are conducted prior to each discharge to assure that such discharges are non oily (e.g. clean waters or stormwaters). Non oily waters consist of, and are limited to, non oily stormwater collected in lined tank basins, stormwater runoff, utility water (well water), chlorinated well water, boiler feedwater, boiler feed water blowdown, non contact cooling water, cooling tower sand filter and iron filter backwash streams, approved hydrostatic test waters, condensate from continuous emission monitoring (for example at heater stack 11H-6), 33V-8 knockout pot condensate, and steam condensates (non cleaning) from the steam generation system discharging to the area drains.

The condensate that periodically collects in the traps of the continuous clean water steam pressure system may be discharged directly to the ground surface in the vicinity of the steam traps.

Non oily waters (e.g. clean waters and stormwaters) may also be discharged to the WWTP or process sewers serving the WWTP, only if needed.

6.9 Heat exchanger backwashes, heater decoking wastewaters, and area cleaning waters (firewater) may be discharged to the WWTP or discharged to the area drains served by diversion boxes, as already approved by the MPCA. Heat exchanger backwash and heater decoking, and area cleaning shall be scheduled and performed during dry weather periods to ensure that such flows are diverted in total to the WWTP via the diversion boxes. Areas that drain to the area drains shall be cleaned at a frequency pursuant to the Sewer Operating Procedures plan dated December 30, 1999 or more frequently if necessary, and all wastewaters generated by cleaning shall be discharged to the WWTP or process sewers, either directly to the process sewers or to the WWTP via the diversions boxes serving the area drains. The cleaning procedures shall also be completed after the heat exchanger backwash and heater decoking discharges have been completed in that respective area. Area cleaning shall be conducted in accordance with the Sewer Operating Procedures plan dated December 30, 1999.

Chapter 1. Surface Discharge Stations

6. Special Requirements

6.10 The clean water sewer is the sewer serving the boilerhouse. Discharges to the clean water sewer include boiler blowdown and boilerfeed water from deaerators at the boilerhouse, multi media filter backwash water, neutralized demineralizer regenerate discharges, backwash rinsewater from anion exchanger, reverse osmosis system concentrate, minor residual clean in place reverse osmosis flush, limited stormwater and containment water overflow from 2 acid dilution pits at Cooling Tower #1, stormwater from storm sewers outside RO building near Tank 512. The clean waters sewer discharges to the B-5 basin or to the lower basin in the event the B-5 basin is out of service and may on occasion be discharged to the WWTP.

6.11 The Permittee shall not discharge any other waters (including non oily waters) or wastewater streams to the area drains or clean water sewer except those described above or in the 1998 Stipulation Agreement unless approved by the MPCA.

Firewater Use and Management

6.12 The Permittee is prohibited from discharging any water from the fire hydrant system with the exception of discharges that are authorized by the Permittee's Firewater Use and Management Plan (e.g. fires, comparable fire related emergencies, necessary hydrant testing). The fire hydrant system may be used for emergency purpose of fighting fires off Flint Hills Resources' property. The fire hydrant system shall not be used to dispose of any waters, including any waters from the stormwater basins, or for any other purpose or in any other manner except as authorized in the Firewater Use and Management Plan. The hydrant system shall not be used to dispose of any water to the soil or directly to B5, unless approved by the MPCA, or authorized pursuant to the Firewater Use and Management Plan. Any changes to the Firewater Use and Management Plan dated May 2001 shall be approved by the MPCA.

Aeration Tanks Dissolved Oxygen Monitoring

6.13 Each WWTP activated sludge aeration tank or basin (currently 3A, 3B, 3C) shall be monitored for dissolved oxygen levels on a continuous basis. Dissolved oxygen data (24 hour averages) shall be submitted within the monthly discharge monitoring report. Downtime in dissolved oxygen data is allowed for routine maintenance and calibration, or when the basin is temporarily out of service.

Project Certification

6.14 The Permittee is required to make a project certification and to submit the project certification to the MPCA before beginning actual construction of a new project or initiating a project consisting of modification of existing equipment as defined in the May 1, 2007 addendum to the October 2006 NPDES Renewal Application. The Permittee shall complete the project certification in accordance with the format specified in the May 1, 2007 addendum to the October 2006 NPDES Renewal Application. The addendum to the October 2006 NPDES Renewal Application shall be considered an effective part of this permit.

Change in Discharge

6.15 All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil or criminal penalties as provided for in Section 309 of the Act, Minnesota Statute 115.071.

Chapter 1. Surface Discharge Stations

6. Special Requirements

6.16 The Permittee shall give notice to the Commissioner of any planned physical alterations or additions to its petroleum refinery if one of the following criteria applies:

a. The alteration or addition may meet one of the criteria for determining whether the altered or additional facility is a new source under 40 CFR Section 122-29.

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

Upon receipt of notice of such alteration or addition to the petroleum refinery, the Commissioner may commence a permit modification in accordance with MPCA rules.

6.17 Any anticipated change in the facility discharge, including any facility expansions, production increases, process modifications, new or modified industrial discharges, or change in the quality of existing industrial discharges to the treatment system that may result in a new or increased discharge of pollutants shall be reported to the Commissioner. Modification to the permit may then be made to reflect any necessary change in permit conditions, including any necessary effluent limitations for any pollutant identified and limited herein.

Chlorinated Pesticides

6.18 The Permittee shall monitor the SD001 effluent for chlorinated pesticides using EPA method 608 annually.

6.19 The results of the annual sampling event for chlorinated pesticides should be submitted along with the DMR report for the month the samples were collected. The Permittee shall note on the first page of the DMR that the results of the chlorinated pesticides samples are included in the submittal.

Chapter 2. Waste Stream Stations

1. Requirements for Specific Stations

1.1 WS 002: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Sampling Location

2.1 Dissolved oxygen monitoring is required for WS002 aeration tanks.

3. Sampling Frequency

Fecal Coliform Monitoring

3.1 The MPCA is modifying this permit requirement to remove fecal coliform sampling at WS001 pursuant to June 2, 2010 letter.

Chapter 3. Industrial Process Wastewater

1. Prohibited Discharges

1.1 This permit does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

1.2 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.

Chapter 3. Industrial Process Wastewater

1. Prohibited Discharges

- 1.3 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

2. Toxic Substance Reporting

- 2.1 The Permittee shall notify the MPCA immediately of any knowledge or reason to believe that an activity has occurred that would result in the discharge of a toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10 or listed below that is not limited in the permit, if the discharge of this toxic pollutant has exceeded or is expected to exceed the following levels:
- a. for acrolein and acrylonitrile, 200 ug/L;
 - b. for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, 500 ug/L;
 - c. for antimony, 1mg/L;
 - d. for any other toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10, 100 ug/L; or
 - e. five times the maximum concentration value identified and reported for that pollutant in the permit application. (Minnesota Rules, pt. 7001.1090, subp. 2.A)
- 2.2 The Permittee shall notify the MPCA immediately if the Permittee has begun or expects to begin to use or manufacture as an intermediate or final by-product a toxic pollutant that was not reported in the permit application under Minnesota Rules, pt. 7001.1050, subp. 2.J. (Minnesota Rules, pt. 7001.1090, subp. 2.B)

3. Hydrotest Discharges

- 3.1 Hydrostatic test waters shall be managed and discharged pursuant to the Flint Hills Resources Hydrostatic Test Water Management Plan, as approved by the MPCA. Any hydrostatic test waters from tanks not previously analyzed and approved for discharge to the stormwater basins or alternate locations approved by the MPCA, such as clarified oil shall be discharged to the WWTP until approval is issued.

4. Polychlorinated Biphenyls (PCBs)

- 4.1 PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment.

5. New Proposed Dewatering

- 5.1 The Permittee shall obtain a permit modification before discharging from a new dewatering outfall.

6. Application for Permit Reissuance

- 6.1 The permit application shall include analytical data as part of the application for reissuance of this permit. These analyses shall be done on individual samples taken during the twelve-month period before the reissuance application is submitted.

Chapter 3. Industrial Process Wastewater

6. Application for Permit Reissuance

- 6.2 The permit application shall include analytical data for at least the following parameters at monitoring station SD001:
- a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;
 - b. color, fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;
 - c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, strontium, thallium, tin, titanium, vanadium, zinc (all in total form) using atomic absorption (AA) furnace methods according to 40 CFR Part 136.3;
 - d. total mercury using EPA Method 1631;
 - e. gross alpha particles, radium-226, radium-228, radon-222, uranium;
 - f. PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260; and
 - g. a scan of constituents using EPA Methods 624 and 625, in 40 CFR Part 136.

The Permittee shall identify, in addition to those pollutants noted in Methods 624 and 625 (Appendix D, Table II), the concentrations of at least ten of the most abundant constituents of the acid and base/neutral organic fractions shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) within ten percent of the nearest internal standard. Identification shall be through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation and potential quantification.

Chapter 4. Non-waste Streams -- Mercury Minimization Plan

1. Mercury Pollutant Minimization Plan

- 1.1 Mercury is present in all municipal and many industrial wastewater discharges. Mercury is a powerful neurotoxin that affects human health and the environment. A naturally-occurring element, mercury does not break down into less-harmful substances over time. Instead, mercury released into the environment accumulates in fish and animal tissues, a process known as bioaccumulation. Widespread mercury contamination has prompted the Minnesota Department of Health (MDH) to issue fish consumption advisories throughout the state. Most of Minnesota's impaired waters are contaminated by mercury and other bioaccumulative toxins. The MPCA is carefully evaluating all mercury discharges in the state.

Chapter 4. Non-waste Streams -- Mercury Minimization Plan

1. Mercury Pollutant Minimization Plan

- 1.2 Permittee's with discharges containing mercury are required to determine the mercury mass loadings from each major process stream, identify existing and potential sources of mercury loading to the facility, document mercury reduction activities implemented, and evaluate further mercury minimization options through the completion and submittal of a Mercury Pollutant Minimization Plan (MMP) to the MPCA.

Flint Hills Resources previously participated in the MPCA's Voluntary Mercury Reduction program to better understand and reduce the levels of mercury at the refinery. Significant tasks completed as part of the voluntary agreement with the MPCA included:

- a) Completion of a mercury mass balance assessment.
- b) Characterization and quantification of efforts to reduce mercury use and emissions.
- c) Preparation of an inventory of materials and equipment used at the refinery that contained mercury.

- 1.3 The Permittee's mercury mass balance and minimization review consisted of the following:

- a) An assessment of mercury concentrations in major contributing wastewater streams.
- b) Identification of existing and potential sources of mercury including concentrations and loading to the facility including groundwater and incoming raw materials (ex. catalysts and other chemical feedstocks).
- c) An evaluation of operations to determine procedures that maximize mercury removal
- d) A summary of mercury reduction activities implemented since 1990.

As determined from the mass balance review and subsequent research published by other refineries, the primary source of mercury at the facility is the crude oil. Mercury removal through enhanced wastewater treatment is anticipated to be the most effective means for reducing levels in the effluent.

Data collected at the facility as part of the Voluntary Mercury Reduction satisfies the MMP requirement.

- 1.4 The Permittee's chemical management program will be used as a means to screen any new chemical use and prevent use of mercury-containing materials that have the potential to impact wastewater.

2. Compliance Schedule

- 2.1 The Permittee shall submit a Mercury Treatability Plan (Plan), for MPCA review and approval, within 3 months of the permit issuance. The Plan shall include a list of technologies to be evaluated for mercury removal efficiency as well as a schedule to complete the evaluation. The Plan may be modified pursuant to MPCA review.

The technologies to be evaluated shall include, but are not limited to, fine particulate removal technologies, dissolved-phase removal technologies as well as process optimization trials. The Permittee may, upon approval from the Agency, make changes to the Plan as new information emerges and as deemed appropriate.

- 2.2 Submit the results of the Treatability Study within 24 months of MPCA approval of the Plan. The results shall include a description of the preferred technology selected for full-scale implementation along with data supporting the decision.
- 2.3 The Permittee shall submit plans and specifications for the mercury removal technology to-be-installed at the facility for MPCA review and approval within 30 months of permit issuance.
- 2.4 Submit a notice of completion of construction to the MPCA within 18 months of agency approval of Plans and Specifications.
- 2.5 The Permittee shall meet the final mercury limits of 17 ng/l daily maximum and 10 ng/l monthly average within 90 days of completion of construction.

Chapter 4. Non-waste Streams -- Mercury Minimization Plan

3. General Requirements

Mercury Sampling and Analysis

- 3.1 Mercury analysis during the entire permit term is required to be completed 2 times per month using Environmental Protection Agency (EPA) Method 1631, Revision C, and any subsequent EPA revisions to Method 1631. Sampling for mercury shall be done using EPA Method 1669. In the event the EPA approves another low level mercury analytical method the Permittee may use that method, upon request and approval by the MPCA. Mercury sampling and analysis is required only during periods of discharge.

Chapter 5. Phosphorus Management Plan

1. General Requirements

- 1.1 Phosphorus is a common constituent in many wastewater discharges and a pollutant that has the potential to negatively impact the quality of Minnesota's lakes, wetlands, rivers and streams. Therefore, phosphorus discharges are being carefully evaluated throughout the state.

As phosphorus is an essential nutrient for biological activity within the refinery's aeration basins, the Permittee does not attempt to minimize phosphorus loading to the influent to the WWTP. As refinery wastewaters tend to be phosphorus-deficient, phosphorus addition is typically needed to promote biological activity within the WWTP. To the extent that phosphorus addition is necessary, the Permittee shall optimize such additions to minimize phosphorus discharges from its effluent, yet still maintain adequate residual phosphate levels in the WWTP.

- 1.2 Given that Permittee's wastewater treatment plant is phosphorus-limited and that the phosphorus is added to the wastewater stream only when required to enhance biological activity, the Permittee is not required to submit a Phosphorus Management Plan.

Chapter 6. Stormwater Management

1. Authorization

- 1.1 This chapter authorizes the Permittee to discharge stormwater associated with industrial activity in accordance with the terms and conditions of this chapter.
- 1.2 The Permittee shall comply with the general stormwater permit for industrial activity once it is reissued and becomes effective. The Permittee will retain coverage for stormwater discharges under this NPDES/SDS permit and therefore is not required to apply for coverage under the general stormwater permit for industrial activity. However, the Permittee shall comply with any petroleum refining sector specific requirements included in the yet-to-be-reissued general stormwater permit for industrial activity that do not appear in this permit.

2. Prohibited Discharges

- 2.1 This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.
- 2.2 This permit does not authorize discharges from sites for which Environmental Assessment Worksheets or Environmental Impact Statements are required, in accordance with Minn. R. ch. 4410, until that environmental review is completed.
- 2.3 This permit does not authorize the discharge of stormwater associated with an industrial activity if the pollutant loading in the waste stream does not meet the minimum secondary treatment limits for CBOD5 and/or Total Suspended Solids.

Chapter 6. Stormwater Management

3. Water Quality Standards

- 3.1 The Permittee shall operate and maintain the facility and shall control runoff, including stormwater, from the facility to prevent the exceedance of water quality standards specified in Minnesota Rules, chs. 7050 and 7060.
- 3.2 The Permittee shall limit and control the use of materials at the facility that may cause exceedances of ground water standards specified in Minnesota Rules, ch. 7060. These materials include, but are not limited to, detergents and cleaning agents, solvents, chemical dust suppressants, lubricants, fuels, drilling fluids, oils, fertilizers, explosives and blasting agents.

4. Stormwater Pollution Prevention Plan

- 4.1 Submit a Stormwater Pollution Prevention Plan by 180 days after permit issuance.
- 4.2 The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (Plan) to address the specific conditions at the industrial facility. The goal of the Plan is to eliminate or minimize contact of stormwater with significant materials that may result in pollution of the runoff. If contact cannot be eliminated or reduced, stormwater that has contacted significant material should be treated before it is discharged from the site.
- 4.3 The Plan shall be implemented at the site before the Permittee is covered under this permit.
- 4.4 The Stormwater Pollution Prevention Plan shall include a description of appropriate Best Management Practices for protection of surface and ground water quality at the facility, and a schedule for implementing the practices. The Plan shall also include the procedures to be followed by designated staff employed by the Permittee to implement the plan.
- 4.5 The Permittee shall comply with its Stormwater Pollution Prevention Plan.

Plan Contents

- 4.6 Complete a drainage map. The map should indicate the following items at or adjacent to the facility:
 - a. drainage areas and directions of stormwater runoff (indicated by arrows);
 - b. discharge outfalls from the site (structures that carry stormwater runoff from the facility such as ditches or storm sewers);
 - c. the name and location of waters of the state that receive facility stormwater runoff (if waters of the state are too distant from the facility to be indicated on the site map, indicate the name, direction and shortest distance to the lake, river, stream or wetland that receives runoff from your site);
 - d. areas where significant materials are exposed to stormwater;
 - e. locations of storm sewer inlets and an indication of which, if any, structures have floor drains or loading dock drains that are connected to storm sewers; and
 - f. locations and types of Best Management Practices (BMPs) currently installed at the facility to reduce or eliminate pollutants to stormwater.

Chapter 6. Stormwater Management

4. Stormwater Pollution Prevention Plan

- 4.7 Complete an inventory of exposed significant materials. Indicate the types of significant materials handled or stored at the site that may potentially contact stormwater. The following are examples of materials that, if exposed to stormwater, must be included in the inventory:
- a. raw materials, such as fuels; solvents; petroleum products; detergents; plastic pellets; materials used in food processing or production; stockpiled sand, salt or coal;
 - b. by-products or intermediate products, such as wood dust, chips or bark; screened limestone, taconite or gravel by-product, recycled blacktop;
 - c. finished materials, such as metallic products, including scrap metal and recycled or scrap motor vehicle parts, old process equipment/machinery, taconite pellets;
 - d. waste products, such as ashes, sludge, solid and liquid waste, slag;
 - e. hazardous substances designated under section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA);
 - f. any chemical the facility is required to report under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).
- 4.8 Evaluate facility areas for exposure of significant materials to stormwater. In creating the inventory of exposed significant materials, the Permittee must, at a minimum, evaluate the following areas at the industrial site (as well as other areas where appropriate) to determine whether or not significant materials are exposed in these areas:
- a. vehicle and equipment maintenance, parking and storage areas including fueling and washing/cleaning areas, to determine if there is discolored soil in these areas as a result of fuel and lubricant leaks and spills;
 - b. liquid storage tanks and other bulk material stockpile areas;
 - c. loading and unloading areas;
 - d. outdoor manufacturing, processing or storage areas and industrial plant yards, to determine if there is discolored soil in these areas as a result of leaked or spilled solvents, fuels, or lubricants;
 - e. dust or particulate generating areas including dust collection devices that may release dust;
 - f. rooftops contaminated by industrial activity or operation of a pollution control device;
 - g. on-site waste disposal areas, such as waste ponds, dumpsters, solid waste storage or management areas; and
 - h. exposed (non-vegetated) soil areas where there is a potential for erosion to occur.

Chapter 6. Stormwater Management

4. Stormwater Pollution Prevention Plan

4.9 Describe appropriate BMPs, including structural and non-structural BMPs, that will be used at the facility to minimize or eliminate pollution of stormwater at the site. The description must include an objective for each BMP, as well as a description of how to evaluate proper functioning of the BMP and any maintenance requirements of the BMP. BMPs should target significant materials and areas identified in subparts 7 and 8 of this part. The following general categories of BMPs shall be considered and one or more shall be incorporated into the facility's Plan if significant materials are exposed to stormwater on-site:

a. Source reduction: reduce or eliminate the significant materials that are exposed to stormwater. Materials management practices should be evaluated to determine whether inventories of exposed materials can be reduced or eliminated. This can include clean-up of equipment yards, periodic checking of dust control equipment to ensure minimal accumulation of dust in the area of control equipment, removal and treatment of petroleum contaminated soil, consolidation of materials from multiple areas into one area, and training employees regarding proper handling and disposal of materials. Significant materials may also be moved indoors or covered with a tarp or structure to eliminate contact with precipitation.

b. Diversion: divert stormwater drainage away from exposed significant materials through use of curbing, berms, sewers or other forms of drainage control or elevate exposed significant material above surrounding drainage.

c. Treatment: where contact of stormwater with significant materials is unavoidable, use treatment devices to reduce the concentration and amount of pollutants in the discharge. Such devices include oil/water separators, stormwater detention/retention ponds, and vegetative swales.

4.10 Evaluate all discharge conveyances from the site (storm sewers, pipes, tile lines, ditches, etc.) to determine if liquids other than stormwater are being discharged from these devices. This should be done during dry weather when stormwater discharge is not occurring. The evaluation should cover sewer inlets and floor drains to determine which inlets/drains are connected to sanitary sewer lines, storm sewer lines, or septic tanks/drainage fields; appropriate methods such as dye or smoke testing or video imaging should be used to determine the source of discharges.

The Plan must certify that discharges from the site have been evaluated for the presence of non-stormwater discharges. The certification shall indicate the date of testing, location of testing, describe the method used to determine the source of discharges and the results of testing. Discharge of non-stormwater (such as sanitary sewer or floor drain connections to storm sewers) is not authorized by this permit; before such discharge may continue, authorization under an appropriate NPDES permit must be obtained.

4.11 Develop a preventive maintenance program. The program must require regular inspection and maintenance of stormwater management devices (e.g. cleaning oil/water separators and catch basins), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants (e.g. hydraulic leaks, torn bag-house filters) to surface waters.

4.12 Develop a spill prevention and response procedure. In order to develop this procedure, Permittees should evaluate where spills have occurred and where they have the potential to occur. Determine drainage points for potential spill areas and develop appropriate spill prevention and containment measures, should a spill occur. Detailed procedures for cleaning-up spills shall be identified and made available to appropriate personnel. If your facility has any other spill contingency plan that satisfies the above requirements, that plan may be incorporated by reference into this Plan to satisfy this requirement.

4.13 Develop and implement an employee training program to inform appropriate personnel of the components and goals of the Plan. Training shall address spill response, good housekeeping and materials management practices. The Plan shall identify periodic dates for such training.

4.14 Identify personnel responsible for managing and implementing the Plan as well as those responsible for the reporting requirements of this permit. This should include the facility contact person as indicated on the permit application. Identified personnel must be available at reasonable times of operation.

Chapter 6. Stormwater Management

5. Temporary Protection and Permanent Cover

- 5.1 The Permittee shall provide and maintain temporary protection or permanent cover for the exposed areas at the facility.
- 5.2 Temporary protection methods are used to prevent erosion on a short-term basis, such as the placement of mulching straw, wood fiber blankets, wood chips, erosion control netting, or temporary seeding.
- 5.3 Permanent cover or final stabilization methods are used to prevent erosion, such as the placement of rip rap, sodding, or permanent seeding or planting. Permanent seeding and planting must have a uniform perennial vegetation cover of at least 70 percent density to constitute final stabilization.

6. Inspection and Maintenance

Leak Detection in Stormwater Ponds

- 6.1 Except as specified in this permit, basins at the refinery shall be inspected monthly for leaks. Leak inspections of the southwest stormwater basin, the coker runoff basin, the Lower Basin North Cell, and the B-5 basin shall be completed using the basins' leak detection systems. Results of these leak detection inspections shall be recorded, with data maintained at the refinery, to determine if any leakage is occurring through the primary liner. If leakage is determined the leakage rate shall be reported to the MPCA. Upon leak detection above permitted limits Flint Hills Resources shall submit a corrective measures report for MPCA approval within 45 days after leak detection for resolution of the leakage.

The Lower Basin South Cell, which was recently re-lined with a polyurea liner, and passed an MPCA approved 30-day leak detection test, is not subject to monthly leak inspections. Furthermore, once the installation of new polyurea liners at the Lower Basin North Cell and Coke Basin is complete, and the liners have passed MPCA-approved leak detection tests, those basins no longer have to be tested monthly for leaks.

Monthly inspections are not required for the south stormwater basin. Leak detection inspections may be discontinued during ice up periods.

- 6.2 The southwest, coker runoff, and lower basins' liners shall be visually inspected annually. Any punctures, tears, holes, or other liner intrusions which may result in leakage shall be repaired as soon as possible in accordance with liner repair procedures described in the submitted technical specifications for the liner. A liner inspection report shall be submitted to the MPCA within 30 days after the inspection. The B-5 basin shall not require an annual inspection. However, in the event excessive leakage is determined to be occurring at B-5 a corrective measures report shall be submitted for MPCA approval within 45 days after determination of excessive leak detection for resolution of the leakage. Excessive leakage is described as leakage which may potentially impact liner integrity or affect groundwater transmission in adjacent areas (lower lagoon), and in no case shall exceed 500 gallons per acre per day.
- 6.3 In the event that any basin liner is required to be replaced in the future due to discovered excessive leakage, engineering plans and specifications shall be submitted for MPCA approval prior to the liner replacement.

Chapter 6. Stormwater Management

6. Inspection and Maintenance

Basin Liner Inspection Requirements

- 6.4 Stormwater inspections shall be conducted at least once every two months throughout the calendar year. During winter months, the inspections shall be conducted during non-frozen conditions. Inspections shall be conducted by an appropriately trained personnel at the facility site, as identified in part 4.13 of this chapter. The purpose of inspections is to: 1) determine whether structural and non-structural BMPs require maintenance or changes, and 2) evaluate the completeness and accuracy of the Plan.

At least one inspection during a reporting period shall be conducted while stormwater is discharging from the facility. Inspections may be documented using an inspection form provided by the MPCA. A Storm Water Site Inspection Form is provided in the appendices section of this permit.

- 6.5 Inspections shall be documented and a copy of all documentation shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The inspection form developed for the General Storm Water Permit for Industrial Activity may be used for recording inspection results, and is included in the appendices section of this permit.

- 6.6 The following compliance items will be inspected, and documented where appropriate:

- a. evaluate the facility to determine that the Plan accurately reflects site conditions as described in subpart 6 of this part, and document any inaccuracies;
- b. evaluate the facility to determine whether new exposed materials have been added to the site since completion of the Plan, and document any new significant materials;
- c. during the inspection conducted during the runoff event, observe the runoff to determine if it is discolored or otherwise visibly contaminated, and document observations; and,
- d. determine if the non-structural and structural BMPs as indicated in the Plan are installed and functioning properly.

- 6.7 The Permittee shall ensure that temporary protection and permanent cover for the exposed areas at the site are maintained.

- 6.8 Indicate the date and time of the inspection as well as the name of the inspector on the inspection form.

- 6.9 When the depth of sediment collected in the final sedimentation basin above the outfall reaches one-half of the riser height, or one-half of the basin design hydraulic storage volume, the Permittee shall drain the basin and remove the sediment within three days of discovery. No outflow from the sedimentation basin shall occur while sediment is being removed from that basin. The sediment removed from the basin shall be disposed of at a site which drains to sedimentation basin(s) at the facility.

- 6.10 If conditions are observed at the site that require changes in the Plan, such changes shall be made to the Plan prior to submission of the annual report for that calendar year.

- 6.11 The Permittee shall minimize vehicle tracking of gravel, soil or mud onto paved surfaces at the facility.

- 6.12 If the findings of a site inspection indicate that BMPs are not meeting the objectives as identified in subpart 9 of this part, corrective actions must be initiated within 30 days and the BMP restored to full operation as soon as field conditions allow.

- 6.13 The Permittee shall remove tracked material from the road surface and return it to the facility within one (1) day of discovery so that the materials drain to sedimentation basin(s) at the facility.

7. Sedimentation Basin Design and Construction

New Sedimentation Basins

Chapter 6. Stormwater Management

7. Sedimentation Basin Design and Construction

- 7.1 Sedimentation basins shall be designed by a registered professional engineer, and installed under the direct supervision of a registered professional engineer.
- 7.2 The basin shall provide at least 1800 cubic feet, per acre drained, of hydraulic storage volume below the top of the outlet riser pipe.
- 7.3 Inlet(s) and outlet(s) shall be designed to prevent short circuiting and the discharge of floating debris.
- 7.4 The inlet(s) shall be placed at an elevation at least above one-half of the basin design hydraulic storage volume.
- 7.5 The outlet(s) shall consist of a perforated riser pipe wrapped with filter fabric and covered with crushed gravel. The perforated riser pipe shall be designed to allow complete drawdown of the basin(s).
- 7.6 Permanent erosion control, such as rip rap, splash pads or gabions shall be installed at the outlet(s) to prevent downstream erosion.
- 7.7 The basins shall be designed to allow for regular removal of accumulated sediment by a backhoe or other suitable equipment.

8. Application of Chemical Dust Suppressants

- 8.1 Chemical dust suppressants, if used, shall not be applied within 100 feet of the surface receiving waters identified in the 'Facility Description' section of this permit. These materials also shall not be applied within 100 feet of ditches that conduct surface flow to the surface receiving waters identified on Page 1 of this permit.

9. Reporting

- 9.1 Submit a Stormwater Annual Report by March 31 of each year following permit issuance. A copy of the Stormwater Annual Report Form is provided in the appendices section of this permit.
- 9.2 The Permittee shall, upon request of the Agency, submit within a reasonable time the information and reports that are relevant to compliance with this Chapter, including the Plan, inspection reports, annual reports, original laboratory sheets from analyses conducted on the waste stream, and BMP plans and specifications.

10. Records

- 10.1 The Plan shall be retained for the duration of the permit. A copy of the Plan shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The Permittee shall maintain the following records for the period of permit coverage:
 - a. dates of inspections;
 - b. findings of inspections;
 - c. corrective actions taken;
 - d. documentation of all changes to the Plan; and,
 - e. a copy of annual reports.

11. Notification

- 11.1 If the Permittee discharges stormwater into a municipal storm sewer, the Permittee shall notify the operator of the municipal storm sewer of the existence of this permit.

Chapter 6. Stormwater Management

12. Request for Termination of Stormwater Permit Coverage

- 12.1 All Permittees regulated by 40 CFR 122.26(b)(14)(i) through (ix) and (xi) may request termination of permit coverage by applying for the no exposure exclusion from permitting. The Permittee must submit (form provided by the Agency) a written certification that a condition of no exposure exists at the facility and that the facility meets the definition of no exposure of industrial activities and materials to storm water.

The application for the no exposure exclusion must be completed by the Permittee and sent to: MPCA, Industrial Storm Water Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

Failure to complete an accurate application will result in the facility being denied the no exposure exclusion from permitting. The facility must submit the application to the Agency once every five years.

- 12.2 The no exposure exclusion is conditional. The Permittee must maintain a condition of no exposure at the facility in order for the no exposure exclusion to remain applicable. In the event of any change or circumstance that causes exposure of industrial activities or materials to stormwater, the Permittee must comply with the stormwater requirements of this chapter.
- 12.3 The no exposure certification is non-transferrable. In the event that the facility operator changes, then the new operator must submit a new no exposure certification to the MPCA, Industrial Stormwater Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.
- 12.4 The Commissioner retains the authority to require the facility operator to comply with the requirements of this chapter, even when an industrial operator certifies no exposure, if the Commissioner has determined that the discharge is contributing to the violation of, or interfering with the attainment or maintenance of water quality standards, including designated uses.

13. Definitions

- 13.1 "No exposure" means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt, and/or runoff. Industrial activities or materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.
- 13.2 "Non-stormwater discharge" means any discharge not comprised entirely of stormwater discharges authorized by a NPDES permit.
- 13.3 "Runoff" means any liquid that drains over land from any part of a facility.

Chapter 6. Stormwater Management

14. General Requirements

Stormwater Basins Operations and Discharge Approval Requirements

- 14.1 Stormwater basins (South, Southwest, and Lower) contents shall be consumed, recycled, and reused within the refinery water supply as makeup to refinery cooling towers, or other refinery water supply to the maximum extent possible, on a continuous basis. Stormwater basin contents may be diverted to the WWTP without analyses in the event of excess stormwater basin contents.

Stormwater basin contents shall not be discharged to the ground or directly to the B5 basin or the polishing ponds unless approved by the MPCA. Any request for discharge shall include analytical data for the parameters described below, including total flow. Stormwater basin contents may only be discharged to the B-5 basin after meeting a minimum of the following:

Biochemical Oxygen Demand 5 (BOD 5)	- 25 mg/l
Total Suspended Solids (TSS)	- 30 mg/l
Phenols	- 2214 ug/l
Zinc	- 234 ug/l
Lead	- 164 ug/l
Cyanide	- 45 ug/l (free cyanide)
Gasoline Range Organics (GRO)	- 3636 ug/l
Diesel Range Organics (DRO)	- 5514 ug/l
Ammonia	- 10 mg/l

The stormwater basin contents shall be analyzed for these parameters by representative sampling prior to any discharge in accordance with sampling and analysis requirements set forth by the MPCA for the discharge event.

- 14.2 The B-5 pond contents shall be analyzed monthly. B-5 pond contents shall be analyzed for COD, TSS, ammonia, DRO (diesel range organics), GRO (gasoline range organics), phenols, zinc, lead, and cyanide (free). The B-5 pond analytical data shall be submitted in the monthly discharge monitoring report. B-5 basin contents, including stormwater contained within this basin, are discharged to the polishing ponds. The B-5 basin contents may also be directed to the stormwater basins as needed to maintain adequate firewater inventories.

Chapter 7. Total Facility Requirements

1. General Permit Requirements

Chemical Additives

- 1.1 The Permittee shall evaluate chemical additives before increasing the use of a chemical additive authorized by this permit or previously approved by the MPCA, or using a new chemical additive not authorized by the permit or previously approved by the MPCA. "Chemical additive" includes processing reagents, water treatment products, cooling water additives, freeze conditioning agents, chemical frost suppressants, detergents and solvent cleaners used for equipment and maintenance cleaning, biocides and slimicides, among other materials.

Chapter 7. Total Facility Requirements

1. General Permit Requirements

- 1.2 The Permittee shall evaluate the chemical additive to determine the impact of a chemical additive in the following areas:
 - a. Evaluate the potential for impact on the wastewater treatment plant. Chemical additives that cause upset of the treatment processes or may cause exceedance of effluent limitations shall not be used, or used at a dosage that will preclude upset or any deterioration in performance of the wastewater treatment processes and will be below applicable effluent limitations. Mass balance assessments shall be completed to the extent needed to determine this evaluation.
 - b. Evaluate the potential for aquatic toxicity of the chemical additive that may be present in the treated effluent. Chemical additives which may cause acute toxicity in the effluent to applicable test species shall not be used, but can be used at a dosage that is not acutely toxic in the effluent, or used at a dosage where wastewater treatment will render the chemical additive not acutely toxic in the effluent.
 - c. Evaluate the potential for adverse human health impacts, including human or mammalian toxicity, and evaluate suspected or known impacts related to carcinogenicity, and mutagenic and teratogenic effects. Chemical additives causing these effects shall not be used, but can be used at dosages that do not produce these effects, or used where the wastewater treatment process will treat or remove the chemical additive to a level that will not produce these effects.
- 1.3 The use of any chemical additive at a dosage equivalent to or exceeding the above described restrictions shall not be used unless approved by the MPCA. In the event that the Permittee is uncertain of the potential impact of a chemical additive approval shall be obtained from the MPCA before using the chemical additive.
- 1.4 The Permittee shall use qualified personnel with appropriate engineering and/or toxicological background in making the above evaluations. The Permittee may use a new chemical additive or adjust the dosage of existing chemical additives after completing the above evaluations.
- 1.5 The Permittee shall use the following information in conducting evaluation of a proposed additive:
 - a. Material Safety Data Sheet.
 - b. A complete product use and instruction label.
 - c. The commercial and chemical names of all ingredients.
 - d. Aquatic toxicity and human health or mammalian toxicity data including a carcinogenic, mutagenic or teratogenic concern or rating.
 - e. Environmental fate information including, but not limited to, persistence, half-life, intermediate breakdown products, and bioaccumulation data.
 - f. The proposed method, concentration, and average and maximum rates of use.
 - g. If applicable, the number of cycles before wastewater bleedoff.
 - h. If applicable, the ratio of makeup flow to discharge flow.
- 1.6 The Permittee shall maintain a record of chemical additive evaluations for changes in chemical additives used. The Permittee shall submit these evaluations for a chemical additive conducted in any month in the subsequent monthly discharge monitoring report (DMR). This permit may be modified to restrict the use or discharge of a chemical additive.

Chapter 7. Total Facility Requirements

2. General Requirements

General Requirements

- 2.1 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.
- 2.2 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)
- 2.3 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules, parts 7050.0100 to 7050.0220 and 7052.0010 to 7052.0110 (applicable to toxic pollutants in the Lake Superior Basin) and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)
- 2.4 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)
- 2.5 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- 2.6 Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)
- 2.7 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)
- 2.8 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)
- 2.9 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)
- 2.10 Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.
- 2.11 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.
- 2.12 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. (Minn. R. 7001.0150, subp.3, item I)

Chapter 7. Total Facility Requirements

2. General Requirements

- 2.13 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

Sampling

- 2.14 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))
- 2.15 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)
- 2.16 Certified Laboratory. A laboratory certified by the Minnesota Department of Health shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)
- 2.17 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.
- 2.18 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)
- 2.19 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):
- a. The exact place, date, and time of the sample or measurement;
 - b. The date of analysis;
 - c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and
 - d. The analytical techniques, procedures and methods used; and
 - e. The results of the analysis.

Chapter 7. Total Facility Requirements

2. General Requirements

- 2.20 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

Supplemental Report Form (Supplemental)

Individual values for each sample and measurement must be recorded on the Supplemental which, if required, will be provided by the MPCA. Supplementals shall be submitted with the appropriate DMRs. You may design and use your own Supplemental; however it must be approved by the MPCA. Note: Required Summary information MUST also be recorded on the DMR. Summary information that is submitted ONLY on the Supplemental does not comply with the reporting requirements.

- 2.21 Submitting Reports. DMRs and Supplementals shall be submitted to:

MPCA

Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

DMRs and Supplementals shall be postmarked by the 21st day of the month following the sampling period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the reporting period. (Minn. R. 7001.0150, subps. 2.B and 3.H)

Other reports required by this permit shall be postmarked by the date specified in the permit to:

MPCA

Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

- 2.22 Incomplete or Incorrect Reports. The Permittee shall immediately submit an amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. (Minn. R. 7001.0150 subp. 3, item G)
- 2.23 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

Chapter 7. Total Facility Requirements

2. General Requirements

2.24 Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

- a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.
- b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.
- c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. (Minn. R. 7001.0150, subp. 2, item B)

2.25 Records. The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minn. R. 7001.0150, subp. 3, item H)

2.26 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

- 2.27 Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)
- 2.28 Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp. 3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)
- 2.29 Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))
- 2.30 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. Violations that are determined to pose a threat to human health or a drinking water supply, or represent a significant risk to the environment shall be immediately reported to the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area). In addition, you may also contact the MPCA during business hours. Otherwise the violations and the results of any additional sampling shall be recorded on the next appropriate DMR or report.

Chapter 7. Total Facility Requirements

2. General Requirements

- 2.31 Unauthorized Releases of Wastewater Prohibited. Except for conditions specifically described in Minn. R. 7001.1090, subp. 1, items J and K, all unauthorized bypasses, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)
- 2.32 Discovery of a release. Upon discovery of a release, the Permittee shall:
- a. Take all reasonable steps to immediately end the release.
 - b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area) immediately upon discovery of the release. In addition, you may also contact the MPCA during business hours at 1(800) 657-3864.
 - c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.
 - d. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.
 - e. Submit the sampling results as directed by the MPCA. At a minimum, the results shall be submitted to the MPCA with the next DMR.
- 2.33 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:
- a. The specific cause of the upset;
 - b. That the upset was unintentional;
 - c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;
 - d. That at the time of the upset the facility was being properly operated;
 - e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and
 - f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

Operation and Maintenance

Chapter 7. Total Facility Requirements

2. General Requirements

- 2.34 The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150. subp. 3, item F.
- 2.35 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)
- 2.36 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)
- 2.37 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)
- 2.38 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

- 2.39 Permit Modifications. No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the Agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

- 2.40 Construction. No construction shall begin until the Permittee receives written approval of plans and specifications from the MPCA (Minn. Stat. Sec. 115.03(f)).

Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

- 2.41 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit.

Chapter 7. Total Facility Requirements

2. General Requirements

- 2.42 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.
- 2.43 TMDL Impacts. Facilities that discharge to an impaired surface water, or to a watershed or drainage basin that contains impaired waters, may be required, at some future date, to comply with additional permits, or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A)) and 40 CFR 122.44.1.2.i, based on the conclusions of any applicable US EPA approved Total Maximum Daily Load (TMDL) studies, their associated implementation plans or additional sampling or monitoring.
- 2.44 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minn. R., 7001.0150, subp. 3, item N)
- 2.45 Facility Closure. The Permittee is responsible for closure and postclosure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, postclosure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA.

- 2.46 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

- a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;
- b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;
- c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.

Submittals and Actions Checklist Flint Hills Resources Pine Bend LLC

This checklist is intended to assist you in tracking the reporting requirements of your permit. However, it is only an aid. PLEASE CONSULT YOUR PERMIT FOR THE EXACT REQUIREMENTS.

Please note: This checklist only details submittal requirements for the next five years. DMRs, Annual Reports, and many other submittals are required even after the expiration date of this permit, and continue to be due until the permit is either reissued or terminated.

Submit DMRs to:

Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Rd N
St. Paul, MN 55155

Submit other WQ reports to:

Attention: Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St. Paul, MN 55155

MPCA Staff Contacts:

For DMR-related questions:
Linda Brooks at (651)757-2248
For other questions:
Gary Simonsen at (651)757-2726

2011

- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit a Stormwater Annual Report (due before Mar 31) (Permit Req't. 6.9.1)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
- Submit DMR (due before Jun 22)
- Submit the first test battery results (due before Jul 20) (Permit Req't. 1.5.2)
- Submit DMR (due before Jul 22)
- Submit DMR (due before Aug 22)
- Submit DMR (due before Sep 22)
- Submit DMR (due before Oct 22)
- Submit DMR (due before Nov 22)
- Submit the second test battery results (due before Dec 20) (Permit Req't. 1.5.3)
- Submit DMR (due before Dec 22)

2012

- Submit an application for permit reissuance (due before Jan 3) (Permit Req't. 7.2.46)
- Submit DMR (due before Jan 22)
- Submit DMR (due before Feb 22)
- Submit DMR (due before Mar 22)
- Submit a Stormwater Annual Report (due before Mar 31) (Permit Req't. 6.9.1)
- Submit DMR (due before Apr 22)
- Submit DMR (due before May 22)
- Submit DMR (due before Jun 22)

Other Submittals

- Submit a notice of completion of construction to the MPCA within 18 months of agency approval of Plans and Specifications. (Permit Req't. 4.2.4)

